BYTE QUEST

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Contents:

Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

 Good, bad or indifferent if you are not investing in new technology, you are going to be left behind.

-Philip Green

 Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

-Stewart Brand

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D-WAVE QUANTUM COMPUTING

Generally, the information in binary data is stored in the form of bits which are stored using 0's and1's but where as in quantum computing the basic unit to store information is quantum bit (or qubit). A quantum bit is a two-state (or two-level) quantum-mechanical system which is used to encode information as 0's, 1's, or simultaneously. The superposition of states, along with the quantum effects of entanglement and quantum tunnelling, enable quantum computers to consider and manipulate many combinations of bits simultaneously

"The D-Wave 2000Q Quantum Computer". This computer leverage quantum dynamics to accelerate and enable new methods for solving discrete optimization, sampling, and machine learning problems**.**

K. VAMSHI KUMAR (CSE B 2/4)

BLOCKCHAIN TECNOLOGY

The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value. It is a continuously growing record, called blocks, which are secured and linked using cryptography. Each block typically contains a cryptographic hash of the previous block, a timestamp and transaction data.

Though the blockchain is primarily designed for cryptographic transactions, it can be used in various industries.

For example, in a factory, when the product is manufactured and all the details of the materials used are stored in the form of blocks, the origin of each material can be easily traced out.

The blockchain technology is expeditiously growing in the current technological field and is the future tech because it is very seldomly seen where a technology is easy, flexible and secure.

It is estimated that the IT industry requires 7 million engineers, who are blockchain professionals, by 2020. And no wonder why Blockchain is the future.

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5G TECHNOLOGY

5G stands for fifth-generation cellular wireless , and the initial standards for it were set at the end of 2017.The G in 5G means it's a generation of wireless technology. While most generations have technically been defined by their data transmission speeds, each has also been marked by a break in encoding methods, or "air interfaces," which make it incompatible with the previous generation.

Like other cellular networks, 5G networks use a system of cell sites that divide their territory into sectors and send encoded data through radio waves. Each cell site must be connected to a network backbone, whether through a wired or wireless backhaul connection. 5G networks will use a type of encoding called OFDM, which is similar to the encoding that 4G LTE uses.

5G primarily runs in two kinds of airwaves: below and above 6 GHz .

But a standard doesn't mean that all 5G will work the same—or that we even know what applications 5G will enable. There will be slow but responsive 5G, and fast 5G with limited coverage. Let us take you down the 5G rabbit hole to give you a picture of what the upcoming 5G world will be like.

AT&T has proclaimed that it will be first with mobile 5G when it launches a network in 19 cities by the end of this year. The company has listed 19 cities and says that initially there will be one 5G device, a mobile internet hotspot that we think will be a version of the Netgear Mihawk M1 . Phones will come next year. AT&T will use 38Ghz spectrum for its initial rollout.

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